

# White Paper Report

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**Name of Project:** Thai Digital Monastery

**Institution:** University of California at Riverside

**Project Director:** Justin McDaniel

**Award Amount:** \$30,000

**Project Website (s):** [www.tdm.ucr.edu](http://www.tdm.ucr.edu) and <http://amdwork.ucr.edu/tdm/>

### **White Paper:**

Below summarizes the launching of the Thai Digital Monastery Project. My name is Justin McDaniel, an associate professor of Southeast Asian and Religious Studies at the University of California (Riverside). I am the founder of the TDM project, but am assisted by a number of technical experts and scholars in Thailand, France, Australia, Japan, England, Laos, India, Germany, and the United States. The funding for the first year of this project is from the U.S. National Endowment for the Humanities. Creating a monastic digital library for Thailand involves interconnecting technology, field data, and a supportive community of experts and enthusiasts. We strongly adhere to the notion that exposing hidden and scattered data to a large multi-lingual international community of learners can generate new research initiatives, juxtapose previously disconnected concepts and discourses, and inspire new students in the fields of anthropology, history, art, linguistics, religious studies, literature, etc. The knowledge community that is generated out of virtual interactive environments can question stereotypes, reconfigure old epistemic structures, and postulate new notions of what it means to be both a modern global citizen and a traditional monastic student.

This cooperative work with a wide range of scholars on a wide range of materials in several interrelated fields will ensure that this project impacts intellectual discourse in a variety of venues. This project is a cooperative effort with junior and senior Thai and non-Thai scholars which will train local ethnographers, historians, and librarians in preservation, cartographic, and technical methods. This will certainly lead to future joint projects and mapping of other monasteries throughout the country.

### **Brief History of Project**

McDaniel, along with Dr. Caverlee Cary (UC Berkeley), and Dr. M.R. Pattaratorn Chirapravati ( California State University , Sacramento ) won a PACRIM grant for 15,000 USD for a project titled: “The Map and the World in Buddhism.” □ This grant has allowed us to plan two conferences ( Riverside , CA and Bangkok , Thailand ) and sponsor a presentation on the use of GIS technology and interactive mapping at Asian Buddhist monastic centers. Speakers at these conferences include Jose Cabezon (UCSB), Patrice Ladwig ( Cambridge ), Nicolas Jimanez-Ortiz Corrales (University of Madrid), Bas Jarend Terwiel (University of Hamburg), Leedom Lefferts (Drew University), and many others in Thailand, Japan , South Korea , and the U.S. . This planning for these conferences has generated a number of ideas for the use of new technologies in the digital mapping, especially in the use of geographically referenced information, the construction of various topology levels along appropriate scalar values, remote sensing, and digital representation of natural or constructed features, boundaries, and other spatial data. Multiple competing cultural and historical concepts of scared space, cosmology, symbol rich landscapes, and even gendered spaces within monasteries have enlivened the planning and implementation.

After receiving the NEH Digital Humanities Start-Up Grant in July 2007, McDaniel immediately purchased film and computer equipment. McDaniel was able to save funds by purchasing multiple pieces of equipment at once:

- 1) AR590 laptop computer with blueray disc: 3,299.99 +2 year warrantee 199.99
- 2) FZ 180 laptop 1999.99 + 2 year warrantee 199.99
- 3) HDR SR5 Camcorder 1099.99 +2 year war 199.99
- 4) DSC-H9 camera 479.99+2 year war. 99.99
- 5) VCT-R640 tripod 49.99
- 6) ECM HGZ1 shotgun mic 69.99
- 7) Wide Angle Lens VCL-DH0774  
VCL-DH0774 199.99
- 8) 1GB Memory Stick PRO-HG Duo™ Media  
MSE-X1G 49.99

This equipment was purchased with a combination of NEH funding and funding from the Department of Religious Studies at UC Riverside. After the equipment was purchased, it was field tested at Wat Lao Riverside, a local Buddhist monastery. McDaniel, along with a professional film maker, Ignatius Fischer, who worked without charge, tested the HD video camera and DSC-H9 camera and mic. Fischer edited the raw film and recommended methods for filming in Thailand.

In the fall of 2007, Kelvin Mac and James Lin assisted McDaniel in building the TDM website (tdm.ucr.edu). This website has several sections:

- [Welcome](#)
- [History of Project](#)
- [Thai Buddhism](#)
- [Thai Monastery](#)
  - [Life and Education](#)
  - [Buddhist Texts](#)
  - [Art and Architectures](#)
  - [Ritual and Liturgy](#)
  - [Monasteries in Detail](#)
- [Collections](#)
  - [Image Library](#)
  - [Video Library](#)
  - [Primary Sources](#)
  - [Secondary Sources](#)
  - [Reference Works](#)
  - [Panoramas and Three-Dimensional Immersive Environments](#)
- [Scholarly Resources](#)

- [Internet Resources](#)
  - [Related Academic Associations](#)
  - [Archives and Libraries](#)
- 
- ☐ [Message Board and Listserve](#)
  - ☐ [Membership](#)
  - ☐ [Contribute to the TDM](#)
  - ☐ [Languages](#)
  - ☐ [Technology FAQs](#)
  - ☐ [Contacts](#)

Except for “technology FAQs” and “Message Board and Listserv” all of these sections have been “launched.” McDaniel wrote the text, including over 60 pages describing the basics of Thai Buddhism, as well the institutional and textual and art history. He created links to over 100 scholarly organizations, archives, and websites which will assist students and the general public to learn more about Buddhism and Thai culture.

Once the website was constructed, McDaniel flew to Thailand to begin collecting raw data and to hold the meetings with experts on the project.

Initially planned for three days, the training session expanded into an initial one day meeting followed by five weeks on training three monks in the field. McDaniel and his main assistant, the former monk, Phanuthep, taught the monks monastic students how to digitally document, map and archive. The meeting and training sessions, conducted in Thai and English, were also assisted by Ven. Dr. Anil Sakya (Phra Sugandha) at Mahamakut Monastic University on the grounds of the Wat Bovornivet Monastery. The facilities for the meeting were provided free of charge which allowed funding to be shifted to both funding of field assistants and technological work.

Filming, photography, interviews, mapping took place five days a week for five weeks at Wat Rakhang, Wat Ratchaorot, Wat Saphum, among other monasteries (Wat Ratchapradit, Wat Indrawihan, Wat Ratchabandit, Wat Suwannaram, and Wat Mahabut). Once buildings, images,

rituals had been filmed, marked up and catalogued, McDaniel and Phanuthep (with the technical assistance of Mr Matthew Wheeler, interviewed other monastic residents, visitors, patrons, etc.

Depending on the size of the monastery, the number of images, the dimensions of the wall murals, and other factors, McDaniel, Phanuthep, and Wheeler took digital photographs in still shot and panoramic modes. There were between 27-47 panoramas taken of each monastery, along with approximately 4,000 still photographs of each monastery. The high volume of these images was to enabled digital mapping, three-dimensional “walk-throughs,” and high degrees of art historical detail. This has enabled us to construct an immersive digital atmosphere for each monastery.

During the second half of the project, McDaniel supervised the following activities:

- Upload raw data (digital video, audio still photos, 360 degree immersive film, scanned texts).
- Translation and transcription of interviews.
- Create website with links to reference material, technological resources, raw data, film, etc.
- Create an interactive overhead digital map of Wat Ratchaorot, upload the panoramas of Wat Ratchaorot, and upload several videos onto the web.

Working with OpenSource technology, as well as some multi-media software used by Ven. Phra Phanuthep Sutthithep, Sohail Wassif, and Nasser Solomon (the latter two were the supervisors of the project in the multi-media lab at UC Riverside) we starting developing interactive 3-D immersive virtual tours, 360 degree panoramic photographs, maps, recorded interviews, texts, chanting, etc. Besides working with these technologies, we are also dedicated to filing and audio recording in High Definition (HD) film and testing new technologies. This new technology provided clearer images, crisper audio, and more seamless interactive GIS spatial environments. While filming *in situ* we will use High Definition format with a screen dimension ration of 16:9 which does not interlace the images. Therefore, each frame of the recording becomes a potential still image - ready for research use or dissemination in books, articles, web pages. This will allow us to transfer to film for archival purposes as the aspect ratio of HD video is much closer

to that of 35mm motion picture film and is the standard of film editing for the conceivable future. This all promotes the longevity and flexibility of our recordings. Wheeler and Phanuthep helped McDaniel in Thailand to film rituals and festivals. Their help enabled McDaniel to pay a great deal of attention to ambient sound interference, multiple perspective needs, and the necessary accuracy and sensitivity of recording highly detailed sacred events.

Sohail Wassif and Nasser Solomon assisted McDaniel greatly through the use of several new FLASH and other applications that enabled easy data mark-up and display. For example, Sohail mastered the use of 1) Tourweaver 3.0 from Easypano Holdings Inc., 2) Adobe Photoshop, 3) Adobe Flash, and 4) Adobe Illustrator in creative ways. These programs are also widely available which makes the website and its video and photographic content viewable on virtually any modern computer connected to the web. The Tourweaver panoramic movies have been created by Tourweaver and importing of Photoshop, Illustrator and some Flash components into it. Then Sohail used HTML and JavaScript to add interactivity and customization. To make streaming video available for most viewers, McDaniel uploaded raw video into a Youtube archive for easy reference from scholars, students, and the general public.

## **Adjusted Goals**

Although the field work went extremely well, there have been a few unforeseen difficulties in post-production technical work. First, the creation of the panoramic walkthrough immersive tours has faced problems due to budget shortages at UC Riverside. Therefore, McDaniel has only been able to afford to pay for 5 hours per week of labor on the site drawn from NEh funding and UC Riverside internal funding. Second, FLASH upgrades have enabled crisper and faster transfers between panoramic “hubs” on the website, as well as better quality embedded video of interviews and rituals; however, staff needed to be trained in the use of this new FLASH software which took time away from actual execution and uploading.

Besides film and audio quality, McDaniel wants to develop not only document, archive, and disseminate information about monasteries, but they want to provide raw data for linguists, art historians, and anthropologists. Therefore, in documenting each monastery, McDaniel developed a representative corpus of texts and audio/video recordings. This seeks to produce a monitor corpus of data which builds a qualitative glossary that is open ended (meaning in future projects

new digital texts, new images, new rituals, and new locutions can be added seamlessly). From there the corpus of texts, images, and recorded oral histories can be annotated according to material, location, age, performative setting/genre, ritual significance, and time/date. This annotation will allow future work on parallel corpora to trace regional and temporal differences and be able to add further annotation on images, murals, folktales, architectural forms, etc., as well additions to the GIS linguistic, cultural, archaeological, and historical maps. The documentation provides a wide-ranging sample of those infinite varieties. This representative corpus will be the foundation for understanding the way political, geographical, and economic factors have influenced these monastic practices and discourses overtime.

These integrative corpora will allow visitors to will be able to link to bibliographies, full text articles, manuscripts, and secondary sources that can be accessed separately or further link them to imbedded audio-recordings, expert commentary, ethnographic notes, comparative evidence, and historical background. Therefore, each source in the corpora is not simply a text or image, but a hyper-text anthology which can be commented on by the visitor (in a listserv and interactive “in-box”). A visitor can have a voice in the digital library, add notes, ask questions, and seamlessly propel themselves from a particular textual passage, ritual symbol, or art object in the library to its larger diachronic and synchronic environment. For example, if a visitor clicks onto an image of a building in the monastery, they can walk inside, investigate individual statues in the room, and further click onto them which will open up manuscripts that describe them, comparative images at other locales, scholarly articles on the particular image, oral commentary by a monk, historical documents, and rituals offerings to the image. In this way, interdisciplinary research projects are encouraged, instead of art historians only looking at the style of the image, they will have full access to the resources of textualists, linguists, political historians, ethnographers, and vice versa. Since, bibliographies, dictionaries, encyclopedias, concordances, chronicles, timelines, maps, photographs, and other reference material will be available in the site, the visitor does not have to cull and vet hundreds of sources spread worldwide in often difficult to access archives. They can link to HTML pages that are already connected to digital resources in existing libraries, as well as new resources being developed everyday, like Google Scholar, JSTOR, the Digital Pali Canon, on-line archives of manuscripts, newspapers, and documentary films, the Thai Monastic Digital Library will be on the crux of a constantly



growing cyber knowledge consortium. McDaniel adheres to strict and consistent standards and practices to keep the technology viable and the access free from profit motives, political and sectarian grandstanding. To this end, we follow the guidelines and procedures of the National Endowment of the Humanities and the University of California .

The cataloging of statuary, buildings, manuscripts, murals, secondary literature, bibliographies has been going according to schedule, but there were problems with the use of “J-Album” in the image gallery. Therefore, while the image gallery is finished, the captioning of all the images has not been completed. Until this initial captioning is finished, the official launching of the listserve will not take place. This is planned for fall 2008.

### **Future Post-NEH Grant Plans**

Since this is a start-up project, the “proof”□ or “deliverable product”□ will be a “work-in-progress.”□ However, this work-in-progress has already been launched on an interactive website ( [www.tdm.ucr.edu](http://www.tdm.ucr.edu) ). This site allows interaction and create information communities.

Practically, McDaniel is the chair of the Thai, Lao, Cambodian Studies Association of the Association of Asian Studies (the largest group of its kind in the world), and the designer of its website ([tlc.ucr.edu](http://tlc.ucr.edu)). He was also the PI on a PacRim Grant to develop a GIS map and study the impact of political borders on Buddhist ritual practice (which brought together 24 speakers from six countries together for meetings in Bangkok and Riverside , CA ). He was also the organizer for a 12 person panel at the University of London in 2005 at the International Association of Buddhist Studies which featured speakers from France , Thailand , North America , Japan , and Burma . He has researched in manuscript archives in France, Thailand, Laos, Singapore, Denmark, England, and the United States. He is also editor of the Buddhism Compass Journal, the new Journal of Lao Studies, executive committee member of the French journal *Aséanie*, and is a longtime member of the Siam Society, International Association of Buddhist Studies, and American Academy of Religion, the TDM will be able to disseminate its activities to groups outside of Thai and Buddhist Studies.

This cooperative work with a wide range of scholars on a wide range of materials in several interrelated fields will ensure that this project impacts intellectual discourse in a variety of

venues. Since this project is a cooperative effort with junior and senior scholars and native speakers from Thailand, France, and the United States with funding for several graduate student assistants, local ethnographers, and librarians will be trained. This will certainly lead to future joint projects and mapping of other monasteries throughout the country. Several of the participants on this grant, including the three teams leaders have years of experience working on joint projects with UNESCO, Human Rights Watch, Deutscher Akademischer Austausch Dienst, the Association of Asian Studies, the Asia Foundation, the Fulbright Foundation, the PacRim Program, the Toyota Foundation, the Social Science Research Council, l'Ecole Française d'Extrême-Orient, and the Mellon and Ford Foundations. Only with this cooperative spirit and interdisciplinary approach can large, international projects be successful and widely disseminated.

The Thai Monastic Digital Library team aims to develop a “visualizing languages and cultures” course. This course is based on the Massachusetts Institute of Technology's model: <http://ocw.mit.edu/ans7870/21f/21f.027j/menu/index.html> ). MIT's “Visualizing Cultures” provides access to a wide array of visual, audio, and textual material on-line. Each course is replete with extensive bibliographies, lesson plans, annotated slideshows, expert commentary, oral histories, and the like. This material can be enlarged and scrutinized in detail, and also downloaded for use in educational projects. The TDM would design a course “Text, Ritual, and Performance: Monastic Life in Bangkok” for use in undergraduate on-line courses at the ten campuses of the University of California (offered free on web to other universities). Eventually, courses or course components can be developed for elementary and secondary school age children, as well as non-traditional home-schooled, adult, and special needs learners. This course would be first piloted by McDaniel at the University of California, Riverside in the Southeast Asia : Text, Ritual, Performance (SEATRiP) Program.

Finally, Dr. Muhamad Ali (UC Riverside) and myself are planning on applying for a NEH collaborative research grant to expand the TDM project into the SEADMM (Southeast Asia Digital Monastery and Mosque) project. This will take the experience and technological innovations of the TDM project and expand it into a multi-year project to digitally document Islamic mosques and schools in Indonesia and Malaysia to compare and contrast with Buddhist monasteries in Thailand. We are hoping not only to provide documentation for scholars and the

public on Islam and Buddhism in Southeast Asia, but launch a website and on-line course on religion in Southeast Asia more broadly.